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Alcohol-Facilitated Ankylosis of the Distal Intertarsal and Tarsometatarsal Joints in the Horse

James L. Carmalt, MA, VetMB, MVetSc, MRCVS, Diplomate ABVP (Eq), ACVS; Chris Bell, DVM, MVetSc; Luca Panizzi, DVM, MVetSc, Diplomate ACVS; Ryan Wolker, DVM, MVetSc, Diplomate ACVS; Joel Lanovaz, PhD; and David G. Wilson, DVM, Diplomate ACVS

1. Introduction
Osteoarthritis of the distal tarsal joints is a common cause of equine lameness. Ethyl alcohol has been used to induce joint fusion in normal horses. There was no reported pain after injection, and complete ankylosis was seen by 8 mo.

2. Materials and Methods
Eleven horses with hindlimb lameness were enrolled. Each had lameness, force-plate, and radiographic examinations. Intra-articular analgesia localized the lameness to the small tarsal joints. Contrast arthrography was performed, and 3 ml of 70% ethyl alcohol was subsequently injected if contrast agent remained within the tarsometatarsal or distal intertarsal joints. If contrast entered proximal joints, alcohol was not injected. Horses were re-examined every 3 mo for 1 yr. Each horse served as its own control. A further 10 horses were treated by owner request.

3. Results
All horses had a significant reduction in lameness after injection. Twelve months after injection, 10 of 11 study horses were sound, and 1 of 11 horses had a grade of 0.5/5 lameness. Of the clinical horses (2–24 mo after injection), seven of nine horses were sound, two horses remained mildly lame (grade 1), and one horse was lost to follow-up. One lame horse had a concurrent upward fixation of the patella; the other had significant pathology in a distal intertarsal joint, which precluded needle access. Radiographically, there was a reduction in joint space width; however, none of the joints appeared completely fused.
4. Discussion

Intra-articular alcohol injection in horses with arthritis of the small hock joints results in a rapid reduction in lameness and joint space collapse. To date, none of the horses have required re-injection.